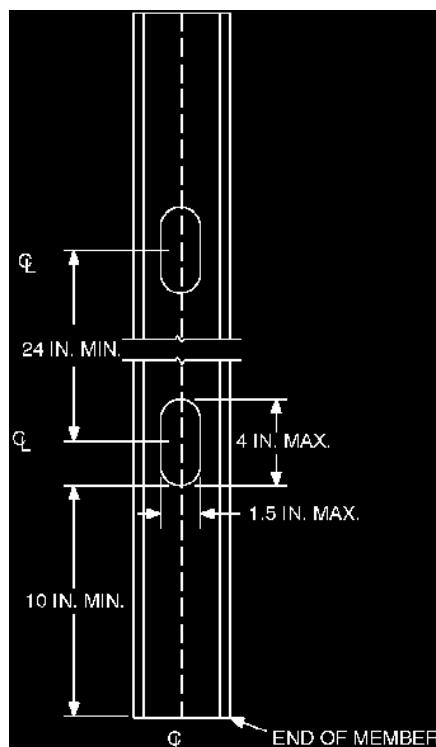
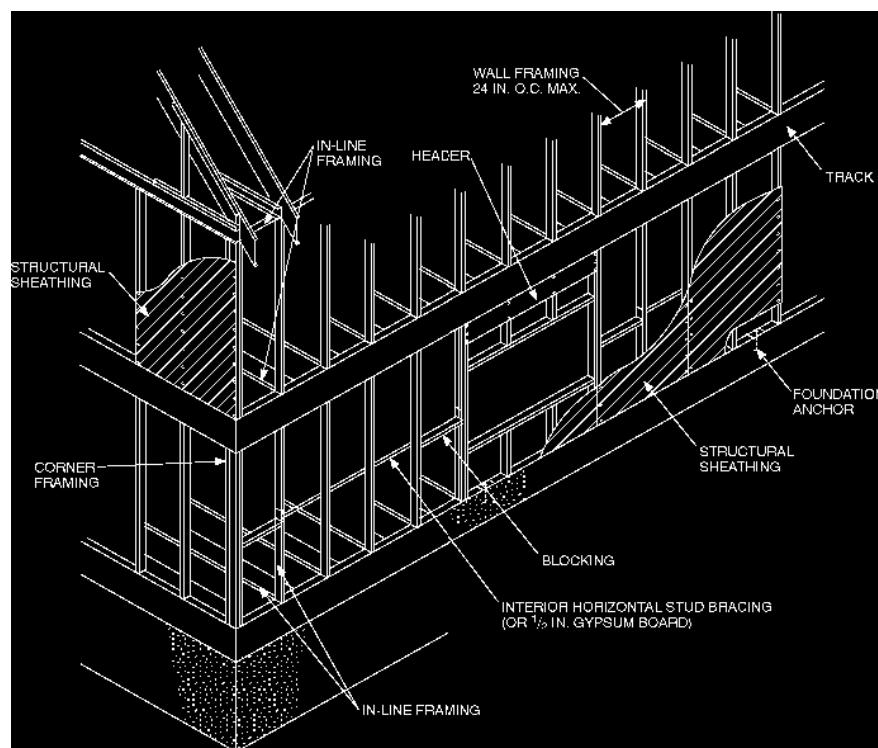


**780 CMR FIGURE 5603.2(3)  
WEB HOLES**

For SI: 1 inch = 25.4 mm.

**780 CMR FIGURE 5603.3  
STEEL WALL CONSTRUCTION**

For SI: 1 inch = 25.4 mm.

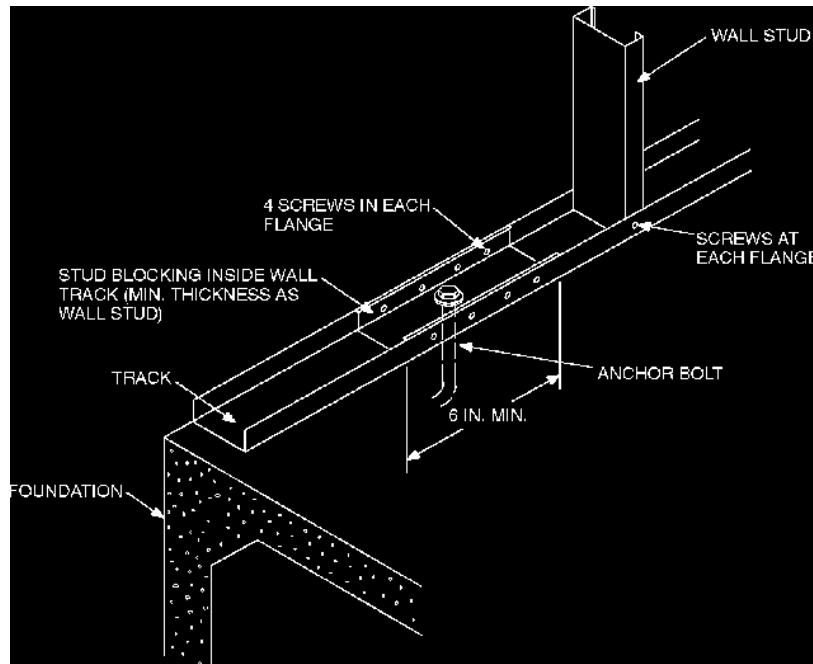
**780 CMR TABLE 5603.3.1**  
**WALL TO FOUNDATION OR FLOOR CONNECTION REQUIREMENTS<sup>a,b,c</sup>**

<b>FRAMING CONDITION</b>	<b>BASIC WIND SPEED (mph) AND EXPOSURE</b>		
	<b>85 A/B</b>	<b>85 C or less than 110 A/B</b>	<b>Less than 110 C</b>
Wall bottom track to floor joist or track	1-No. 8 screw at 12" o.c.	1-No. 8 screw at 12" o.c.	2-No. 8 screw at 12" o.c.
Wall bottom track to wood sill per 780 CMR Figure 5603.3.1(2)	Steel plate spaced at 4' o.c., with 4-No. 8 screws and 4-10d or 6-8d common nails	Steel plate spaced at 3' o.c., with 4-No. 8 screws and 4-10d or 6-8d common nails	Steel plate spaced at 2' o.c., with 4-No. 8 screws and 4-10d or 6-8d common nails
Wall bottom track to foundation per 780 CMR Figure 5603.3.1(1)	½" minimum diameter anchor bolt at 6" o.c.	½" minimum diameter anchor bolt at 6" o.c.	½" minimum diameter anchor bolt at 4" o.c.
Wind uplift connector capacity for 16-inch stud spacing <sup>c</sup>	N/R	N/R	65 lbs.
Wind uplift connector capacity for 24-inch stud spacing <sup>c</sup>	N/R	N/R	100 lbs.

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 1.609 km/hr, 1 pound = 4.4 N.

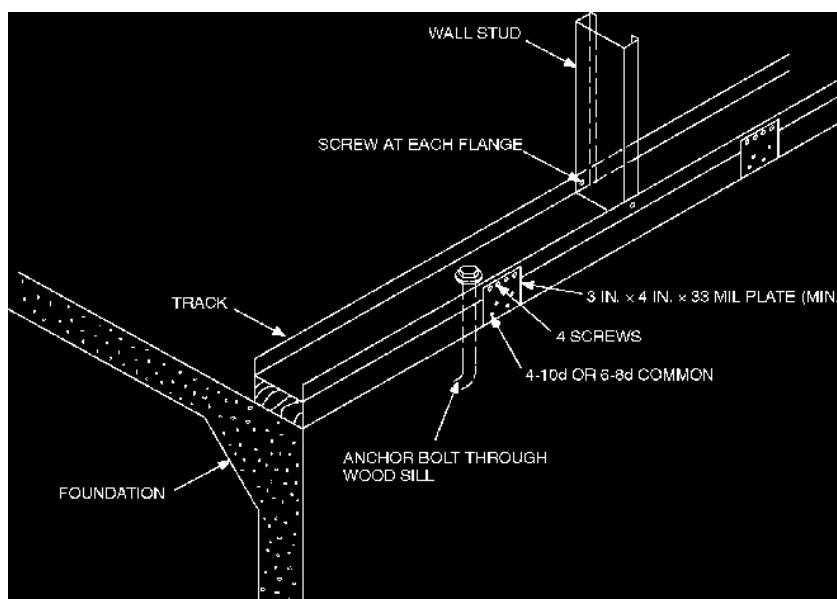
- a. Anchor bolts shall be located not more than 12 inches from corners or the termination of bottom tracks (e.g., at door openings or corners). Bolts shall extend a minimum of seven inches into concrete or masonry.
- b. All screw sizes shown are minimum.
- c. N/R = uplift connector not required. Uplift connectors are in addition to other connection requirements and shall be applied in accordance with 780 CMR 5603.8.

**780 CMR FIGURE 5603.3.1(1)**  
**WALL TO FOUNDATION CONNECTION**



For SI: 1 inch = 25.4 mm.

**780 CMR FIGURE 5603.3.1(2)**  
**WALL TO WOOD SILL CONNECTION**



For SI: 1 inch = 25.4 mm, 1 mil = 0.0254 mm.

**780 CMR TABLE 5603.3.2(1)**  
**WALL FASTENING SCHEDULE<sup>a</sup>**

DESCRIPTION OF BUILDING ELEMENT	NUMBER AND SIZE OF FASTENERS <sup>a</sup>	SPACING OF FASTENERS
Floor joist to track of load-bearing wall	2-No. 8 screws	Each joist
Wall stud to top or bottom track	2-No. 8 screws	Each end of stud, one per flange
Structural sheathing to wall studs	No. 8 screw	6" o.c. on edges and 12" o.c. at intermediate supports
Roof framing to wall	Approved design or tie down in accordance with 780 CMR 5802.11	

For SI: 1 inch = 25.4 mm.

a. All screw sizes shown are minimum.

## THE MASSACHUSETTS STATE BUILDING CODE

**780 CMR TABLE 5603.3.2(2)**  
**COLD-FORMED STEEL STUD THICKNESS FOR 8-FOOT WALLS**

**Studs supporting roof and ceiling only (one-story building or second floor of a two-story building) 33 ksi steel**

WIND SPEED		MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>											
			Building width (feet) <sup>d</sup>											
			24				28				32			
Exp. A/B	Exp. C	MEMBER SIZE <sup>c</sup>	Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)			
			20	30	50	70	20	30	50	70	20	30	50	70
85 mph	—	350S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	43
	—	550S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33
100 mph	85 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	43	33	43
	100 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33
110 mph	100 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	43	43	33	33	43	43	43	43	43
	100 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33
120 mph	110 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	43	43	43	43	43	43	54	43	43	43	54
	110 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33
130 mph	120 mph	350S162	16	33	33	43	43	33	43	43	43	43	43	43
			24	54	54	54	54	54	54	68	54	54	68	68
	120 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	43	33	33	33	43
—	—	350S162	16	43	43	43	43	43	43	43	43	54	43	43
			24	68	68	68	68	68	68	68	68	68	68	68
	—	550S162	16	33	33	33	33	33	33	33	33	33	33	33
			24	33	43	43	43	43	43	43	43	43	43	43

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780CMR 5603.3.2.

## 780 CMR TABLE 5603.3.2(3)

## COLD-FORMED STEEL STUD THICKNESS FOR 8-FOOT WALLS

Studs supporting one floor, roof and ceiling (first story of a two-story building) 33 ksi steel

WIND SPEED		MEMBER SIZE <sup>c</sup>	MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>																	
				Building width (feet) <sup>d</sup>																	
				24				28				32				36					
Exp. A/B	Exp. C	85 mph	350S162	20	30	50	70	20	30	50	70	20	30	50	70	20	30	50	70		
100 mph	85 mph			16	33	33	33	33	33	33	33	33	33	33	43	33	33	33	43		
				24	43	43	43	43	43	43	43	43	43	43	54	43	43	54	54		
				16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33		
				24	33	33	33	33	33	33	33	33	33	43	43	33	43	43	54		
110 mph	100 mph		550S162	16	33	33	33	33	33	33	33	33	33	33	33	43	33	33	43		
				16	33	33	33	33	33	33	33	33	33	33	33	43	33	33	43		
				24	43	43	43	43	43	43	43	43	43	43	43	54	43	43	54		
				16	33	33	33	33	33	33	33	33	33	33	33	43	33	33	43		
120 mph	110 mph		350S162	16	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43		
				24	54	54	54	54	54	54	54	54	54	54	54	68	54	54	68		
				16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33		
				24	33	33	33	33	33	33	33	33	33	33	33	43	33	33	43		
130 mph	120 mph		550S162	16	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43		
				16	43	43	43	54	43	54	54	54	54	54	54	54	54	54	54		
				24	68	68	68	68	68	68	(d)										
				16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33		
— mph	130 mph		350S162	16	54	54	54	54	54	54	54	54	54	54	54	54	68	54	54	68	
				24	(d)																
				16	33	33	33	33	33	33	33	33	33	33	33	33	43	43	43	43	
				24	43	43	54	54	54	54	54	54	54	54	54	54	54	54	54		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed used if wall is fully sheathed per 780 CMR 5603.3.2.

## THE MASSACHUSETTS STATE BUILDING CODE

**780 CMR TABLE 5603.3.2(4)**  
**COLD-FORMED STEEL STUD THICKNESS FOR 9-FOOT WALLS**

**Studs supporting roof and ceiling only (one-story building or second floor of a two-story building) 33 ksi steel**

WIND SPEED		MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>												
			Building width (feet) <sup>d</sup>												
			24				28				32				
Exp. A/B	Exp. C	MEMBER SIZE <sup>c</sup>	Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)				
20	30	50	70	20	30	50	70	20	30	50	70	20	30	50	70
85 mph	—	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	43
	85 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33
100 mph	85 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	43	43	33	33	43	43	33	43	43	43
	100 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33
110 mph	100 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33
			24	43	43	43	43	43	43	43	43	43	43	43	54
	110 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33
120 mph	110 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33	43
			24	54	54	54	54	54	54	54	54	54	54	54	68
	120 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	43
130 mph	120 mph	350S162	16	43	43	43	43	43	43	43	43	43	43	43	54
			24	68	68	68	68	68	68	68	68	68	68	68	(d)
	120 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	43	43	43	43	43	43	43	43	43	43	43
—	130 mph	350S162	16	54	54	54	54	54	54	54	54	54	54	54	54
			24	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
	—	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33
			24	43	43	43	43	43	43	43	43	43	43	43	54

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780 CMR 5603.3.2.

## 780 CMR TABLE 5603.3.2(5)

## COLD-FORMED STEEL STUD THICKNESS FOR 9-FOOT WALLS

Studs supporting one floor, roof and ceiling (first story of a two-story building) 33 ksi steel

WIND SPEED		MEMBER SIZE <sup>c</sup>	MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>												
				Building width (feet) <sup>d</sup>												
				24				28				32				
Exp. A/B	Exp. C			Ground snow load (psf)	20	30	50	70	20	30	50	70	20	30	50	70
85 mph	—	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33	43
			24	43	43	43	43	43	43	43	43	43	43	43	43	54
		550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	43
100 mph	85 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33	43
			24	43	54	54	54	54	54	54	54	54	54	54	54	68
		550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	43
110 mph	100 mph	350S162	16	43	43	43	43	43	43	43	43	43	43	43	43	43
			24	54	54	54	54	54	54	54	54	54	54	54	54	68
		550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	43	43	43	43	43	43	43	43	43	43	54
120 mph	110 mph	350S162	16	43	43	43	43	43	43	43	43	43	43	43	43	54
			24	68	68	68	68	68	68	68	68	68	68	(d)	68	68
		550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	43	43	43	43	43	43	43	43	43	43	43	43	54
130 mph	120 mph	350S162	16	54	54	54	54	54	54	54	54	54	54	54	54	68
			24	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
		550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	43
			24	43	43	54	54	54	54	54	54	54	54	54	54	54
— mph	130 mph	350S162	16	68	68	68	68	68	68	68	68	68	68	68	68	68
			24	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
		550S162	16	33	33	43	43	43	43	43	43	43	43	43	43	43
			24	54	54	54	54	54	54	54	54	54	54	54	54	68

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780 CMR 5603.3.2.

## THE MASSACHUSETTS STATE BUILDING CODE

**780 CMR TABLE 5603.3.2(6)**  
**COLD-FORMED STEEL STUD THICKNESS FOR 10-FOOT WALLS**

**Studs supporting roof and ceiling only (one-story building or second floor of a two-story building) 33 ksi steel**

WIND SPEED		MEMBER SIZE <sup>c</sup>	MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>														
				Building width (feet) <sup>d</sup>														
				24				28				32						
Exp. A/B	Exp. C	Wind speed 85 mph 100 mph 110 mph 120 mph 130 mph — mph	350S162	Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)						
85 mph	—			20	30	50	70	20	30	50	70	20	30	50	70			
				16	33	33	33	33	33	33	33	33	33	33	33			
				24	33	33	33	43	33	33	43	33	33	43	43	43		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
100 mph	85 mph		550S162	24	33	33	33	33	33	33	33	33	33	33	33	33		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
				24	43	43	43	43	43	43	54	43	43	54	43	54		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
110 mph	100 mph		350S162	24	54	54	54	54	54	54	54	54	54	54	54	68		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
				24	33	33	33	33	33	33	33	33	33	33	33	33		
				16	43	43	43	43	43	43	43	43	43	43	43	43		
120 mph	110 mph		550S162	24	68	68	68	68	68	68	68	68	68	68	68	68		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
				24	33	33	43	43	33	33	43	43	43	43	43	43		
				16	54	54	54	54	54	54	54	54	54	54	54	54		
130 mph	120 mph		350S162	24	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)			
				16	33	33	33	33	33	33	33	33	33	33	33	33		
				24	43	43	43	43	43	43	54	43	43	54	43	54		
				16	68	68	68	68	68	68	68	68	68	68	68	68		
— mph	130 mph		550S162	24	(d)	(d)	(d)	—	(d)	(d)	—	(d)	(d)	—	—			
				16	33	33	33	43	33	33	43	33	33	43	33	43		
				24	54	54	54	54	54	54	54	54	54	54	54	54		
				16	54	54	54	54	54	54	54	54	54	54	54	68		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780 CMR 5603.3.2.

## 780 CMR TABLE 5603.3.2(7)

## COLD-FORMED STEEL STUD THICKNESS FOR 10-FOOT WALLS

Studs supporting one floor, roof and ceiling (first story of a two-story building) 33 ksi steel

WIND SPEED		MEMBER SIZE <sup>c</sup>	MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>													
				Building width (feet) <sup>d</sup>													
				24				28				32					
Exp. A/B	Exp. C	85 mph	350S162	Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)					
100 mph	85 mph			20	30	50	70	20	30	50	70	20	30	50	70		
				16	33	33	43	33	33	43	43	43	43	43	43		
				24	54	54	54	54	54	54	54	54	54	54	54		
				16	33	33	33	33	33	33	33	33	33	33	33		
110 mph	100 mph		550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	
				16	43	43	43	43	43	43	43	43	43	43	43	43	
				24	54	54	68	68	68	68	68	68	68	68	68	68	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
120 mph	110 mph		550S162	24	33	33	43	43	43	43	43	43	43	43	43	43	
				16	43	43	43	43	43	43	43	43	43	43	43	43	
				24	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
130 mph	120 mph		350S162	24	43	43	43	54	43	54	54	54	54	54	54	54	
				16	54	54	54	54	54	54	54	54	54	54	54	54	
				24	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
—	130 mph		550S162	24	43	43	43	54	43	54	54	54	54	54	54	54	
				16	68	68	68	68	68	68	68	68	68	68	68	68	
				24	(d)	(d)	—	—	—	—	—	—	—	—	—	—	
				16	43	43	43	43	43	43	43	43	43	43	43	43	

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780 CMR 5603.3.2.

## THE MASSACHUSETTS STATE BUILDING CODE

## 780 CMR TABLE 5603.3.2(8)

**COLD-FORMED STEEL STUD THICKNESS FOR 8-FOOT WALLS** Studs supporting roof and ceiling only (one-story building or second floor of a two-story building) 50 ksi steel

WIND SPEED		MEMBER SIZE <sup>c</sup>	MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>													
				Building width (feet) <sup>d</sup>													
				24				28				32					
Exp. A/B	Exp. C	Wind speed 85 mph 100 mph 110 mph 120 mph 130 mph — mph	350S162	Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)					
85 mph	—			20	30	50	70	20	30	50	70	20	30	50	70		
				16	33	33	33	33	33	33	33	33	33	33	33		
				24	33	33	33	33	33	33	33	33	33	33	33		
				16	33	33	33	33	33	33	33	33	33	33	33		
100 mph	85 mph		550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
			350S162	24	33	33	33	33	33	33	33	33	33	33	33	33	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
110 mph	100 mph		550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
			350S162	24	33	33	33	33	33	33	33	33	33	33	33	33	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
120 mph	110 mph		550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
			350S162	24	33	33	33	43	33	43	43	33	33	43	43	43	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
130 mph	120 mph		550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
			350S162	24	43	43	43	43	43	43	43	43	43	43	43	43	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
— mph	130 mph		550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	
				16	33	33	33	33	33	33	33	33	33	33	33	33	
			350S162	24	43	54	54	54	54	54	54	54	54	54	54	54	
				16	33	33	33	33	33	33	33	33	33	33	33	33	

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780 CMR 5603.3.2.

## 780 CMR TABLE 5603.3.2(9)

## COLD-FORMED STEEL STUD THICKNESS FOR 8-FOOT WALLS

Studs supporting one floor, roof and ceiling (first story of a two-story building) 50 ksi steel

WIND SPEED		MEMBER SIZE <sup>c</sup>	MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>															
				Building width (feet) <sup>d</sup>															
				24				28				32				36			
Exp. A/B	Exp. C	85 mph	—	Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)			
20	30	50	70	20	30	50	70	20	30	50	70	20	30	50	70	20	30	50	70
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
350S162	24	33	33	33	43	33	33	43	43	43	43	43	43	43	43	43	43	43	54
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
350S162	24	33	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	54
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
350S162	24	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	54
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
350S162	24	43	43	43	54	43	54	54	54	54	54	54	54	54	54	54	54	54	54
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
16	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
350S162	24	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	33	33	33	43	33	43	43	43	43	43	43	43	43	43	43	43	43	43
16	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
350S162	24	54	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780 CMR 5603.3.2.

## THE MASSACHUSETTS STATE BUILDING CODE

**780 CMR TABLE 5603.3.2(10)**  
**COLD-FORMED STEEL STUD THICKNESS FOR 9-FOOT WALLS**

**Studs supporting roof and ceiling only (one-story building or second floor of a two-story building) 50 ksi steel**

WIND SPEED		MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>																
			Building width (feet) <sup>d</sup>																
			24				28				32				36				
Exp. A/B	Exp. C	MEMBER SIZE <sup>c</sup>	Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)				
20	30	50	70	20	30	50	70	20	30	50	70	20	30	50	70	20	30	50	70
85 mph	—	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
	—	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
100 mph	85 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
	100 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
110 mph	100 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
	110 mph	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
120 mph	110 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
	—	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
130 mph	120 mph	350S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	43	43	54	54	43	54	54	54	54	54	54	54	54	54	54	54
	—	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
—	—	350S162	16	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
			24	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
	—	550S162	16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
			24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780CMR 5603.3.2.

## 780CMR TABLE 5603.3.2(11)

## COLD-FORMED STEEL STUD THICKNESS FOR 9-FOOT WALLS

Studs supporting one floor, roof and ceiling (first story of a two-story building) 50 ksi steel

WIND SPEED		MEMBER SIZE <sup>c</sup>	MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>															
				Building width (feet) <sup>d</sup>															
				24				28				32				36			
Exp. A/B	Exp. C	85 mph	—	Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)			
20	30	50	70	20	30	50	70	20	30	50	70	20	30	50	70	20	30	50	70
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
350S162	24	33	33	33	43	33	43	43	43	43	43	43	43	43	43	43	43	43	43
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
350S162	24	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	54
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
350S162	24	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	54
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	43
350S162	24	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	68
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
16	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	54
350S162	24	54	54	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
16	43	43	43	54	43	43	54	54	54	54	54	54	54	54	54	54	54	54	54
350S162	24	68	68	68	68	68	68	68	68	68	68	68	68	68	(d)	(d)	68	(d)	(d)
16	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
550S162	24	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	54

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780 CMR 5603.3.2.

**780 CMR: STATE BOARD OF BUILDING REGULATIONS AND STANDARDS**  
**THE MASSACHUSETTS STATE BUILDING CODE**

**780CMR TABLE 5603.3.2(12)**

## COLD-FORMED STEEL STUD THICKNESS FOR 10-FOOT WALLS

**Studs supporting roof and ceiling only (one-story building or second floor of a two-story building) 50 ksi steel**

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch

selection criteria: 1/240.

b. Building width is in the di-

design load assumptions:

Roof dead load is 12 psf

Attic live load is 10 psf.

## 780 CMR TABLE 5603.3.2(13)

## COLD-FORMED STEEL STUD THICKNESS FOR 10-FOOT WALLS

Studs supporting one floor, roof and ceiling (first story of a two-story building) 50 ksi steel

WIND SPEED		MEMBER SIZE <sup>c</sup>	MEMBER SPACING (inches)	STUD THICKNESS (mils) <sup>a,b</sup>														
				Building width (feet) <sup>d</sup>														
				24				28				32						
Exp. A/B	Exp. C	Wind speed 85 mph 100 mph 110 mph 120 mph 130 mph — mph	350S162	Ground snow load (psf)				Ground snow load (psf)				Ground snow load (psf)						
85 mph	—			20	30	50	70	20	30	50	70	20	30	50	70			
				16	33	33	33	33	33	33	33	33	33	33	33			
				24	43	43	43	43	43	43	43	43	54	54	43	54		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
100 mph	85 mph		550S162	24	33	33	33	33	33	33	33	33	33	33	33	33		
				16	33	33	33	33	33	33	33	33	43	43	43	43		
				24	43	43	54	54	54	54	54	54	54	54	54	54		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
110 mph	100 mph		350S162	24	54	54	54	54	54	54	54	54	68	68	54	68		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
				24	33	33	33	33	33	33	33	43	43	43	43	43		
				16	43	43	43	43	43	43	43	43	43	43	43	43		
120 mph	110 mph		550S162	24	54	54	68	68	68	68	68	68	68	68	68	(d)		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
				24	43	43	43	43	43	43	43	43	43	43	43	43		
				16	54	54	54	54	54	54	54	54	54	54	54	54		
130 mph	120 mph		350S162	24	68	68	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
				24	43	43	43	43	43	43	43	43	43	43	43	43		
				16	54	54	54	54	54	54	54	54	54	54	54	54		
— mph	130 mph		550S162	24	54	54	54	54	54	54	54	54	54	54	54	54		
				16	33	33	33	33	33	33	33	33	33	33	33	33		
				24	43	43	54	54	54	54	54	54	54	54	54	54		
				16	43	43	54	54	54	54	54	54	54	54	54	54		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mil = 0.0254 mm, 1 mile per hour = 1.609 km/h, 1 pound per square foot = 0.0479kN/m<sup>2</sup>,

1 kilogram per square inch = 6.895 MPa.

a. Deflection criteria: 1/240.

b. Building width is in the direction of horizontal framing members supported by the wall studs.

c. Design load assumptions:

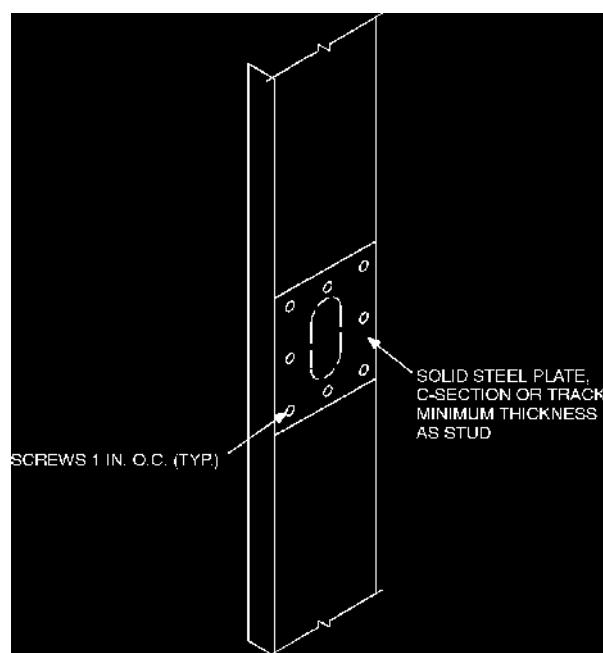
Roof dead load is 12 psf.

Attic live load is 10 psf.

d. 68-mil-thick stud is allowed if wall is fully sheathed per 780CMR 5603.3.2.

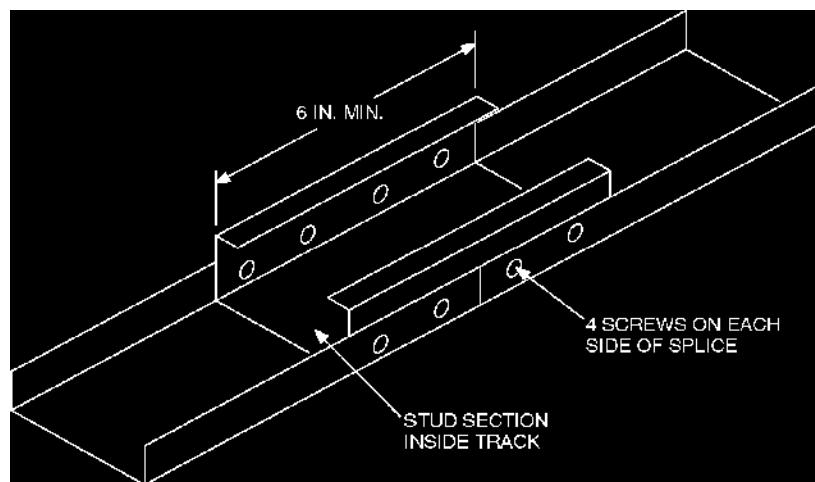
780 CMR: STATE BOARD OF BUILDING REGULATIONS AND STANDARDS  
THE MASSACHUSETTS STATE BUILDING CODE

**780 CMR FIGURE 5603.3.5  
HOLE PATCH**



For SI: 1 inch = 25.4 mm.

**780 CMR FIGURE 5603.3.6  
TRACK SPLICE**



For SI: 1 inch = 25.4 mm.